

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

|   |   |   |  |                      |                |  |             |  |                   |
|---|---|---|--|----------------------|----------------|--|-------------|--|-------------------|
| <b>Appellants:</b> Riou et al.<br><br><b>Title:</b> PRINTING SYSTEM<br>CONDENSOR<br><br><b>Appl. No.:</b> 10/698511<br><br><b>Filing Date:</b> 10/31/2003<br><br><b>Examiner:</b> Fidler, Shelby Lee<br><br><b>Art Unit:</b> 2861 | <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="text-align: center; padding: 2px;"><b><u>CERTIFICATE OF FACSIMILE TRANSMISSION</u></b></td></tr><tr><td style="padding: 2px;">I hereby certify that this paper is being facsimile transmitted to the <b>United States Patent and Trademark Office, Alexandria, Virginia</b> on the date below.</td></tr><tr><td style="text-align: center; padding: 5px;"><i>Todd A. Rathe</i></td></tr><tr><td style="text-align: center; padding: 2px;">(Printed Name)</td></tr><tr><td style="text-align: center; padding: 5px;"> </td></tr><tr><td style="text-align: center; padding: 2px;">(Signature)</td></tr><tr><td style="text-align: center; padding: 5px;"> </td></tr><tr><td style="text-align: center; padding: 2px;">(Date of Deposit)</td></tr></table> | <b><u>CERTIFICATE OF FACSIMILE TRANSMISSION</u></b> | I hereby certify that this paper is being facsimile transmitted to the <b>United States Patent and Trademark Office, Alexandria, Virginia</b> on the date below. | <i>Todd A. Rathe</i> | (Printed Name) |  | (Signature) |  | (Date of Deposit) |
| <b><u>CERTIFICATE OF FACSIMILE TRANSMISSION</u></b>   |   |   |  |                      |                |  |             |  |                   |
| I hereby certify that this paper is being facsimile transmitted to the <b>United States Patent and Trademark Office, Alexandria, Virginia</b> on the date below.  |   |   |  |                      |                |  |             |  |                   |
| <i>Todd A. Rathe</i>  |   |   |  |                      |                |  |             |  |                   |
| (Printed Name)  |   |   |  |                      |                |  |             |  |                   |
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**BRIEF ON APPEAL**

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**1. Real Party in Interest**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249, Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware corporation, headquartered in Palo Alto, California. The general or managing partner of HPDC is HPQ Holdings, LLC.

## **2. Related Appeals and Interferences**

There are no related appeals or interferences that will directly affect, be directly affected by, or have a bearing on the present appeal, that are known to Appellants or Appellants' patent representative.

## **3. Status of Claims**

Claims 1-39 were originally pending in the application. In response to the first substantive Office Action mailed on July 14, 2005, Appellants amended claim 33 to correct an erroneous claim dependency. In response to an office action mailed on June 22, 2006, claims 15, 16 and 23-26 were canceled; claims 1 and 21 were amended and claims 40-43 were added. In response to a final office action mailed on January 3, 2007, claim 6 and 41 were amended. Such amendments were entered. This is an appeal from the Final Office Action mailed on July 5, 2006 finally rejecting claims 1-14, 17-22 and 27-43. The present appeal is directed to claims 1-14, 17-22 and 27-43, i.e., all of the presently pending claims that stand rejected in this application.

## **4. Status of Amendments**

In response to a final office action mailed on January 3, 2007, claims 6 and 41 were amended. Such amendments were entered as indicated in the Advisory Action mailed on March 23, 2007.

## **5. Summary of Claimed Subject Matter**

Claim 1 is directed to a printing system (10) comprising:

an ink dispenser (16) configured to deposit ink upon a print medium (12) (page 3, lines 17-page 4 line 7); and

a condenser (54,154, 254) configured to condense vapor into a condensate (page 4, lines 25-30; page 9, lines and 5-11; page 10, lines 14-25);

a receptacle (88) configured to collect the condensate, wherein the receptacle is perforated to permit a portion of the condensate to evaporate, wherein

the receptacle is removably coupled to a remainder of the system and wherein the receptacle includes:

- an inlet through which the condensate flows into the receptacle; and
- a closing portion (90) movable between an inlet open position and an inlet closing position (page 6, line 25-page 7 line 7).

Claim 27 is directed to a printing system (10) comprising:

- means (16) for depositing ink upon a print medium (page 3, lines 17-page 4 line 7);

- means (54, 154, 254) for condensing vapor to form a condensate (page 4, lines 25-30; page 9, lines and 5-11; page 10, lines 14-25);; and

- means (88) for storing the condensate, wherein the means for storing includes an inlet and means for automatically occluding the inlet when disconnected from a remainder of the printing system (page 6, line 25-page 7 line 7)..

Claim 30 is directed to a method of printing ink upon a medium. The method comprises:

- depositing ink upon the medium (page 3, lines 17-page 4 line 7);
- heating the deposited ink to create a vapor;
- condensing the vapor into a condensate (page 4, lines 25-30; page 9, lines and 5-11; page 10, lines 14-25);

- collecting the condensate in a first receptacle (88) (page 6, line 25-page 7 line 7).; and

- absorbing at least a portion of the condensate into a first absorption member (92) within the first receptacle (88) (page 7, lines 8-15).

Claim 41 depends from base claim 1 and intervening claims 9 and 40. Claim 9 recites that the condenser (254,) includes a thermoelectric module. Claim 40 recites that the condenser includes a plurality of fins (267) thermally coupled to the thermoelectric module. Claim 41 recites that the plurality of fins converge from an

inlet side proximate to the ink dispenser and have a first dimension to an outlet side distant the ink dispenser and having a second smaller dimension (page 10, lines 28-31; Figure 3).

Claim 42 depends from claim 1 and recites at the condenser (254) includes a plurality of fins (267) converging from an inlet side proximate the ink dispenser (16) and having a first dimension to an outlet side distant the ink dispenser (16) and having a second smaller dimension (page 10, lines 28-31; Figure 3).

## **6. Grounds of Rejection to be Reviewed on Appeal**

The issues on appeal are **(1)** whether the Examiner erred in rejecting Claims 1-4, 7-10, 12-14, 18-22 and 43 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) and further in view of US Patent 6,101,356 (Kim); **(2)** whether the Examiner erred in rejecting Claims 5 and 40 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,771,916 (Hoffman); **(3)** whether the Examiner erred in rejecting Claim 6 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,076,913 (Garcia); **(4)** whether the Examiner erred in rejecting Claim 11 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,512,900 (Sakai); **(5)** whether the Examiner erred in rejecting Claim 17 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,357,854 (Igval); **(6)** whether the Examiner erred in rejecting Claims 27 and 29 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) and in view of US Patent 6,076,913 (Garcia); **(7)** whether the Examiner erred in rejecting Claim 28 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563

(Anderson) and in view of US Patent 6,076,913 (Garcia) and further in view of US Patent 6,203,138 (Hirabayashi); **(8)** whether the Examiner erred in rejecting Claims 30, 33-36 and 39 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,397,488 (Brinkly) in view of US Patent 6,203,138 (Hirabayashi); **(9)** whether the Examiner erred in rejecting Claims 31, 32 and 38 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,397,488 (Brinkly) in view of US Patent 6,203,138 (Hirabayashi) and further in view of U.S. Patent 6,176,563 (Anderson); **(10)** whether the Examiner erred in rejecting Claim 37 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,397,488 (Brinkly) in view of US Patent 6,203,138 (Hirabayashi) and further in view of U.S. Patent 6,357,854 (Igval); **(11)** whether the Examiner erred in rejecting Claim 41 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) in view of US Patent 6,771,916 (Hoffman) and further in view of US Patent 5,073,796 (Suzuki); and **(12)** whether the Examiner erred in rejecting Claim 42 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 5,073,796 (Suzuki).

## **7. Argument**

### **I. Legal Standards**

#### **Law of Obviousness**

Claims 1-14, 17-22 and 27-43 are rejected under 35 U.S.C. § 103(a), which states:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter

pertains. Patentability shall not be negated by the manner in which the invention was made.

The legal standards under 35 U.S.C. § 103(a) are well-settled. Obviousness under 35 U.S.C. § 103(a) involves four factual inquiries: 1) the scope and content of the prior art; 2) the differences between the claims and the prior art; 3) the level of ordinary skill in the pertinent art; and 4) secondary considerations, if any, of nonobviousness. See Graham v. John Deere Co., 383 U.S. 1, 148 U.S.P.Q. 459 (1966).

In proceedings before the Patent and Trademark Office, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. In re Piasecki, 745 F.2d 1468, 1471-72, 223 U.S.P.Q. 785, 787-88 (Fed. Cir. 1984). “[The Examiner] can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” In re Fritch, 972 F.2d 1260, 1265, 23 U.S.P.Q. 2d 1780, 1783 (Fed. Cir. 1992).

As noted by the Federal Circuit, the “factual inquiry whether to combine references must be thorough and searching.” McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 60 U.S.P.Q. 2d 1001 (Fed. Cir. 2001). Further, it “must be based on objective evidence of record.” In re Lee, 277 F.3d 1338, 61 U.S.P.Q. 2d 1430 (Fed. Cir. 2002). The teaching or suggestion to make the claimed combination must be found in the prior art, and not in the appellant’s disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q. 2d 1438 (Fed. Cir. 1991). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 U.S.P.Q. 2d 1430 (Fed. Cir. 1990). “It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to [use] that which the inventor taught against its teacher.” Lee (citing W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 U.S.P.Q. 303, 312-13 (Fed. Cir. 1983)).

Teaching away from the claimed invention is a strong indication of non-obviousness and an improper combination of references. U.S. v. Adams, 383 U.S. 39 (1966).

**II. The Examiner's Rejection of Claims 1-4, 7-10, 12-14, 18-22 and 43 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) and further in view of US Patent 6,101,356 (Kim) Should Be Reversed Because It Would Not Be Obvious to Modify Anderson so As to Include Every Limitation of Each of the Claims.**

Claim 1 recites a printing system having a condenser configured to condense vapor into a condensate and a receptacle configured to collect the condensate. The receptacle is removably coupled to a remainder of the system. The receptacle additionally includes an inlet through which the condensate flows into the receptacle and a closing portion movable between an inlet open position and an inlet closing position.

A. Neither Anderson nor Hirabayashi disclose a removable condensate receiving receptacle.

Neither Anderson, Hirabayashi nor Kim, alone or in combination, disclose or suggest a printing system having a condenser and a removable receptacle receiving condensate from the condenser. As acknowledged by the Examiner, Anderson does not disclose a receptacle that receives condensate from the condenser and that is removable. Kim U. S. Patent 6,101, 356 also fails to disclose a removable condensate receiving receptacle.

In rejecting the claims, the Examiner attempts to rely upon Hirabayashi by asserting that Hirabayashi discloses a receptacle that is removably coupled to a remainder of the system. However, the receptacle of Hirabayashi is NOT a condensate receiving receptacle. In contrast, the receptacle disclosed by Hirabayashi is for a completely different purpose: receiving waste ink resulting from the cleaning of the recording head 7 (see column 5, lines 35-44 of Hirabayashi). Neither Anderson nor Hirabayashi provide any motivation or suggestion for replacing reservoir 112 or pan 124 with the waste ink receptacle of Hirabayashi. The Examiner also fails to cite any motivation provided by Anderson or Hirabayashi for



such a modification. In contrast, the only such motivation would appear to be from Appellants' own disclosure.

Moreover, even assuming, arguendo, that would somehow be obvious to combine the teachings of Anderson and Hirabayashi, the resulting hypothetical combination would still fail to result in a printing system having a removable condensate receiving receptacle. In contrast, the resulting hypothetical combination would come at best, constitute the ink marking device of Anderson additionally including the waste ink disposal number 16 of Hirabayashi receiving waste ink resulting from the cleaning of printhead 104 of Anderson.

B Kim also fails to disclose a removable condensate receiving receptacle, while actually teaching away from such a modification.

As with both Anderson and Hirabayashi, Kim also fails to disclose a receptacle that is removably coupled to a remainder of the system and that receives condensate from a condenser. Rather, as with Hirabayashi, carrier tank 860 is merely disclosed as being permanently configured as part of drying unit 300. No where does Kim disclose that tank 860 is removable. In fact, tank 860 is disclose as having an outlet pipe, such that Kim appears to disclose removing material from tank 860 rather than removing and potentially disposing of the entire tank 860 itself. Accordingly, Kim actually teaches away from having a removable tank 860.

C. The Examiner mischaracterizes Appellants' arguments and improperly ignores the context of Hirabayashi to reject the claims.

In responding to Appellants' aforementioned points regarding the improper rejection of claim 1, the Examiner argues that nonobviousness cannot be shown by attacking references individually (Final Office Action, pg. 16), that the test for obviousness is not whether the features of a second a reference may be bodily incorporated into the structure of the primary reference nor is it that the claimed invention must be expressly suggested in any one or all of the references (Office Action, pg. 18). However, this mischaracterizes Appellants' arguments. Appellants have not argued that each reference fails to show all of the limitations of the rejected claims. In contrast, Appellants' point is that not one single reference, whether it be

Anderson, Hirabayashi or Kim, discloses a removable condensate receiving receptacle. Thus, since none of the references disclose a removable condensate receiving receptacle, their combination also obviously cannot result in a removable condensate receiving receptacle.

The Examiner further attempts to sidestep the well-established law that the motivation to combine references must be found in the references themselves by arguing that one may combine teachings without any motivation. What the Examiner appears to be doing is selectively picking and choosing features from multiple references while specifically ignoring the actual context or environment in which such features are disclosed. In particular, the Examiner ignores the actual context of Hirabayashi by improperly asserting:

Examiner would like to point out that the Hirabayashi reference was used only to teach a new removable receptacle within a printing apparatus, while the Kim reference was used only to teach a closing portion movable between an inlet open position and an inlet closing position.

(Final Office Action, pg. 16) (Emphasis added).

Appellants would like to point out that Hirabayashi discloses a removable receptacle for receiving waste ink, not condensate from a condenser. Appellants would also like to point out that Kim teaches a valve mechanism for an ink jet cartridge and has nothing to do with a valve for a condensate receiving receptacle. The Examiner fails to provide any support or motivation for its selective picking and choosing features from references while selectively ignoring other features or the context of the features in the disclosing references. Rather, it appears that the Examiner is selectively picking and choosing features while ignoring others using Appellants' own disclosure as a blueprint for such subjective "decisions". As noted above, taking into account the entire disclosure or "four corners" of the documents relied upon, one of ordinary skill in the art will be led to produce a combination entirely different from that alleged by the Examiner. Accordingly, the rejection of

claim 1 is improper and should be reversed. The rejection of Claims 2-4, 7-10, 12-14 and 18-22, which depend from claim 1, should be reversed for the same reasons.

**III. The Examiner's Rejection of Claims 5 and 40 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,771,916 (Hoffman) Should be Reversed Because It Would Not Be Obvious to Modify Anderson so As to Include Every Limitation of Each of the Claims.**

The rejection of Claims 5 and 40 which depend from claim 1 should be reversed for the same reasons discussed above with respect to claim 1. Hoffman fails to satisfy the deficiencies of Anderson and Hirabayashi.

**IV. The Examiner's Rejection of Claim 6 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,076,913 (Garcia) Should be Reversed Because It Would Not Be Obvious to Modify Anderson so As to Include Every Limitation of Each of the Claims.**

The rejection of Claim 6 which depends from claim 1 should be reversed for the same reasons discussed above with respect to claim 1. Garcia fails to satisfy the deficiencies of Anderson and Hirabayashi.

**V. The Examiner's Rejection of Claim 11 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,512,900 (Sakai) Should be Reversed Because It Would Not Be Obvious to Modify Anderson so As to Include Every Limitation of Each of the Claims.**

The rejection of Claim 11 which depends from claim 1 should be reversed for the same reasons discussed above with respect to claim 1. Sakai fails to satisfy the deficiencies of Anderson and Hirabayashi.

**VI. The Examiner's Rejection of Claim 17 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,357,854 (Igval); Should be Reversed Because It Would Not Be Obvious to Modify Anderson so As to Include Every Limitation of Each of the Claims.**

The rejection of Claim 17 which depends from claim 1 should be reversed for the same reasons discussed above with respect to claim 1. Igval fails to satisfy the deficiencies of Anderson and Hirabayashi.

**VII. The Examiner's Rejection of Claims 27 and 29 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) and in view of US Patent 6,076,913 (Garcia) Should be Reversed Because It Would Not Be Obvious to Modify Anderson so As to Include Every Limitation of Each of the Claims.**

Claim 27 recites a printing system which includes means for condensing vapor to form a condensate and means for storing the condensate, wherein the means for storing includes an inlet and means for automatically occluding the inlet when disconnected from a remainder of the printing system.

Neither Anderson nor Garcia, alone or in combination, disclose means for storing condensate that may be disconnected from the remainder of the printing system. As noted above, Anderson does not disclose a removable condensate receiving receptacle. Neither reservoir 112, nor pan 124 is disclosed as being removable. Page 8 of the Office Action specifically acknowledges that Anderson does not disclose the receptacle that is removably coupled to a remainder of the system.

Garcia also fails to disclose means for storing condensate which may be disconnected from the remainder of the printing system. In fact, the Examiner fails to even allege that Garcia discloses means for storing condensate that may be disconnected from a remainder of the printing system. Thus, the Examiner has failed to establish even a prima facie case of obviousness with regard to claim 27.

Moreover, neither Anderson nor Garcia, alone or in combination, disclose a condensate receiving receptacle having means for automatically occluding an inlet of the storing means when the storing means is disconnected from the remainder of the printing system. Page 10 of the Office Action acknowledges that Anderson does not disclose means for automatically occluding the inlet. As a result, the Examiner attempt to addition to rely upon Garcia. However, Garcia does not disclose a condensate receiving receptacle having means for automatically occluding an inlet of the condensate receiving receptacle. In contrast, Garcia merely discloses a valve arrangement on an inkjet cartridge. Neither Anderson nor Garcia discloses any motivation or suggestion for adding a valve arrangement to reservoir 112 or pan 124. In fact, since neither reservoir 112 nor pan 124 is even removable or disconnectable, there would be no reason to add means for automatically occluding upon disconnection of the storing means. Rather, the only motivation would appear to be from Appellants' own disclosure.

Furthermore, even assuming, arguendo, that it would be obvious to combine the teachings of Anderson and Garcia, the resulting hypothetical combination would still fail to disclose a removable storing means having means for automatically occluding an inlet of the storing means when the storing means is disconnected from the remainder of the printing system. In contrast, at most, the hypothetical combination would consist of the ink marking device of Anderson additionally including one or more ink jet cartridges having the valve of Garcia.

As with the rejection of claim 1, the rejection of claim 27 also appears to be the result of the Examiner selectively picking and choosing features or concepts from the relied upon references while ignoring the main objectives and context of the disclosing references. Since neither Anderson nor Garcia disclosed a removable

condensate receiving receptacle, their combination obviously cannot result in a removable condensate receiving receptacle. Thus, the rejection of claim 27 should be reversed. Claim 29 depends from claim 27 and is patently distinct over the prior art of record for the same reasons.

**VIII. The Examiner's Rejection of Claim 28 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) and in view of US Patent 6,076,913 (Garcia) and further in view of US Patent 6,203,138 (Hirabayashi); Should be Reversed Because It Would Not Be Obvious to Modify Anderson so As to Include Every Limitation of Each of the Claims.**

The rejection of Claim 28 which depends from claim 27 should be reversed for the same reasons discussed above with respect to claim 27. Hirabayashi fails to satisfy the deficiencies of Anderson and Garcia.

**IX. The Examiner's Rejection of Claims 30, 33-36 and 39 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,397,488 (Brinkly) in view of US Patent 6,203,138 (Hirabayashi) Should be Reversed Because It Would Not Be Obvious to Modify Brinkly so As to Include Every Limitation of Each of the Claims.**

Claim 30 recites a method of printing ink upon a medium. The method includes condensing vapor into a condensate, collecting the condensate in a receptacle and absorbing at least a portion of the condensate in an absorption member within the receptacle.

Neither Brinkly nor Hirabayashi, alone or in combination, disclose or suggest absorbing condensate in an absorption member within a receptacle. Page 12 of the Examiner expressly acknowledges that Brinkly does not disclose absorbing condensate in an absorption member within a receptacle. As a result, the Examiner attempts to additionally rely upon Hirabayashi by asserting that Hirabayashi discloses absorbing condensate into an absorption member within a receptacle.

However, this characterization of Hirabayashi is incorrect. Hirabayashi does not disclose absorbing condensate in an absorption member within a receptacle. Hirabayashi does not disclose a condensate receiving receptacle. In contrast, the receptacle disclosed by Hirabayashi is for a completely different purpose: receiving waste ink resulting from the cleaning of the recording head 7 (see column 5, lines 35-44 of Hirabayashi). Neither Brinkly nor Hirabayashi provide any motivation or suggestion for replacing vessel 116 with the waste ink receptacle of Hirabayashi. The Examiner also fails to cite any motivation provided by Brinkly or Hirabayashi for such a modification. In contrast, the only such motivation would appear to be from Appellants own disclosure.

Moreover, even assuming, arguendo, that would somehow be obvious to combine the teachings of Brinkly and Hirabayashi, the resulting hypothetical combination would still fail to result in a printing system having a condensate receiving receptacle with an absorption member for absorbing condensate. In contrast, the resulting hypothetical combination would, at best, constitute the printing device of Brinkly additionally including the waste ink disposal number 16 of Hirabayashi receiving waste ink resulting from the cleaning of print engine 22 of Brinkly.

As with the rejection of claims 1 and 27, the rejection of claim 30 also appears to be the result of the Examiner improperly selectively picking and choosing features from multiple references and combining them improperly using Appellants' own disclosure as a blueprint. Once again, Appellants' point is not that neither Hirabayashi or Brinkly, individually, fail to disclose all of the limitations of claim 30, but that neither Hirabayashi nor Brinkly disclose a condensate absorbing member. Since neither discloses a condensate absorbing member, even their hypothetical combination will not yield a condensate absorbing member within a condensate receiving receptacle. Accordingly, the rejection of claim 30 based on Brinkly and Hirabayashi is improper and should be reversed. Claims 33-36 and 39 depend from claim 30 and overcome the rejection for the same reasons.

**X. The Examiner's Rejection of Claims 31, 32 and 38 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,397,488 (Brinkly) in view of US Patent 6,203,138 (Hirabayashi) and further in view of U.S. Patent 6,176,563 (Anderson) Should be Reversed Because It Would Not Be Obvious to Modify Brinkly so As to Include Every Limitation of Each of the Claims.**

The rejection of Claims 31, 32 and 38 which depend from claim 30 should be reversed for the same reasons discussed above with respect to claim 30. Anderson fails to satisfy the deficiencies of Brinkly and Hirabayashi.

**XI. The Examiner's Rejection of Claim 37 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,397,488 (Brinkly) in view of US Patent 6,203,138 (Hirabayashi) and further in view of U.S. Patent 6,357,854 (Igval); Should be Reversed Because It Would Not Be Obvious to Modify Brinkly so As to Include Every Limitation of Each of the Claims.**

The rejection of Claim 37 which depends from claim 30 should be reversed for the same reasons discussed above with respect to claim 30. Igval fails to satisfy the deficiencies of Brinkly and Hirabayashi.

**XII. The Examiner's Rejection of Claim 41 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) in view of US Patent 6,771,916 (Hoffman) and further in view of US Patent 5,073,796 (Suzuki) Should be Reversed Because It Would Not Be Obvious to Modify Brinkly so As to Include Every Limitation of Each of the Claims.**

Claim 41 depends from claim 9 and recites that the condenser includes fins converging from an inlet side proximate the ink dispenser and having a first dimension to an outlet site distant the ink dispenser and having a second smaller dimension.

Neither Anderson, Hirabayashi, Hoffman nor Suzuki, alone or in combination, disclose or suggest a condenser having fins that converge from an inlet side



proximate the ink dispenser and having a first dimension to an outlet site distant the ink dispenser and having a second smaller dimension. In fact, the Examiner specifically acknowledges that neither Anderson, Hirabayashi nor Hoffman disclose a condenser having fins that converge. As a result, the Examiner attempts to additionally rely upon Suzuki.

However, in contrast to assertion by the Examiner, Suzuki does not disclose a condenser having fins that converge from inlet side to an outlet side. As one of ordinary skill in the art knows and as set forth in the Random House College Dictionary (1984), the term "converge" means to incline toward each other, as lines that are not parallel. Figure 3 clearly illustrates fins or 267 which incline towards one another from an inlet side to an outlet side.

In contrast, fins 119 of Suzuki are parallel. Fins 119 clearly do not converge. Fins 119 clearly do not converge from an inlet side to an outlet side. Accordingly, the rejection of claim 41 is improper and should be reversed.

**XIII. The Examiner's Rejection of Claim 42 under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim and further in view of US Patent 5,073,796 (Suzuki) Should be Reversed Because It Would Not Be Obvious to Modify Anderson so As to Include Every Limitation of Each of the Claims.**

Claim 42 depends from claim 1 and recites that the condenser includes fins converging from an inlet side proximate the ink dispenser and having a first dimension to an outlet site distant the ink dispenser and having a second smaller dimension.

Neither Anderson, Hirabayashi, Kim nor Suzuki, alone or in combination, disclose or suggest a condenser having fins that converge from an inlet side proximate the ink dispenser and having a first dimension to an outlet site distant the ink dispenser and having a second smaller dimension. In fact, the Examiner specifically acknowledges that neither Anderson, Hirabayashi nor Kim disclose a

condenser having fins that converge. As a result, the Examiner attempts to additionally rely upon Suzuki.

However, in contrast to assertion by the Examiner, Suzuki does not disclose a condenser having fins that converge from inlet side to an outlet side. As one of ordinary skill in the art knows and as set forth in the Random House College Dictionary (1984), the term "converge" means to incline toward each other, as lines that are not parallel. Figure 3 clearly illustrates fins or 267 which incline towards one another from an inlet side to an outlet side.

In contrast, fins 119 of Suzuki are parallel. Fins 119 clearly do not converge. Fins 119 clearly do not converge from an inlet side to an outlet side. Accordingly, the rejection of claim 42 is improper and should be reversed.

### **Conclusion**

In view of the foregoing, the Appellants submit that (1) Claims 1-4, 7-10, 12-14, 18-22 and 43 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) and further in view of US Patent 6,101,356 (Kim) and are therefore patentable; (2) Claims 5 and 40 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,771,916 (Hoffman) and are therefore patentable; (3) Claim 6 is not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,076,913 (Garcia) and is therefore patentable; (4) Claim 11 under 35 U.S.C. § 103(a) is not properly rejected as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,512,900 (Sakai) and is therefore patentable; (5) Claim 17 is not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US

Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 6,357,854 (Igval) and is therefore patentable; (6) Claims 27 and 29 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) and in view of US Patent 6,076,913 (Garcia) and are therefore patentable; (7) Claim 28 is not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) and in view of US Patent 6,076,913 (Garcia) and further in view of US Patent 6,203,138 (Hirabayashi) and is therefore patentable; (8) Claims 30, 33-36 and 39 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,397,488 (Brinkly) in view of US Patent 6,203,138 (Hirabayashi) and are therefore patentable; (9) Claims 31, 32 and 38 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,397,488 (Brinkly) in view of US Patent 6,203,138 (Hirabayashi) and further in view of U.S. Patent 6,176,563 (Anderson) and are therefore patentable; (10) Claim 37 is not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,397,488 (Brinkly) in view of US Patent 6,203,138 (Hirabayashi) and further in view of U.S. Patent 6,357,854 (Igval) and is therefore patentable; (11) Claim 41 is not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) in view of US Patent 6,771,916 (Hoffman) and further in view of US Patent 5,073,796 (Suzuki) and is therefore patentable; and (12) Claim 42 is not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over by U.S. Patent No. 6,176,563 (Anderson) in view of US Patent 6,203,138 (Hirabayashi) in view of US Patent 6,101,356 (Kim) and further in view of US Patent 5,073,796 (Suzuki) and is therefore patentable. Accordingly, Appellants respectfully request that the Board reverse all claim rejections and indicate that a Notice of Allowance respecting all pending claims should be issued.

**Summary**

For the foregoing, it is submitted that the Examiner's rejections are erroneous, and reversal of the rejections is respectfully requested.

Dated this 29<sup>th</sup> day of June, 2007.

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**CLAIMS APPENDIX**

1. (Previously Presented) A printing system comprising:  
an ink dispenser configured to deposit ink upon a print medium; and  
a condenser configured to condense vapor into a condensate;  
a receptacle configured to collect the condensate, wherein the  
receptacle is perforated to permit a portion of the condensate to evaporate, wherein  
the receptacle is removably coupled to a remainder of the system and wherein the  
receptacle includes:  
an inlet through which the condensate flows into the receptacle; and  
a closing portion movable between an inlet open position and an inlet  
closing position.
2. (Original) The system of Claim 1, wherein the condenser includes:  
a conduit having a conduit interior; and  
a coolant source connected to the conduit and configured to supply  
coolant into the conduit interior at a temperature so as to condense the vapor along  
the conduit.
3. (Original) The system of Claim 2, wherein the coolant source is  
configured to supply a liquid at a temperature so as to condense the vapor along the  
conduit.
4. (Original) The system of Claim 2, wherein the coolant source is  
configured to supply a gas at a temperature so as to condense the vapor along the  
conduit.
5. (Original) The system of Claim 2, wherein the condenser includes a fin  
thermally coupled to the conduit.
6. (Previously Presented) The system of Claim 1, further comprising  
means for automatically moving the closing portion to the inlet closing position when  
the receptacle is disconnected from the remainder of the printing system.

7. (Original) The system of Claim 2, wherein the coolant source includes:  
a pump configured to move fluid; and  
a cooling device configured to cool the fluid to the temperature.
8. (Original) The system of Claim 7, wherein the cooling device includes  
a compressor.
9. (Original) The system of Claim 1, wherein the condenser includes a  
thermoelectric module.
10. (Original) The system of Claim 1 including a blower configured to  
move the vapor along the condenser.
11. (Original) The system of Claim 10 including:  
a duct proximate the condenser and having an exhaust opening; and  
a filter between the condenser and the exhaust opening.
12. (Original) The system of Claim 1, wherein the receptacle includes a  
condensate-absorbing material within the receptacle.
13. (Original) The system of Claim 12, wherein the condensate-absorbing  
material is removable from the receptacle.
14. (Original) The system of Claim 12, wherein the condensate-absorbing  
material comprises a foam.
15. (Canceled)
16. (Canceled)
17. (Original) The system of Claim 1, wherein the receptacle includes a fill  
indicator configured to indicate a volume of the receptacle that is filled with  
condensate.
18. (Original) The system of Claim 1, wherein the ink dispenser includes  
an inkjet printhead.

19. (Original) The system of Claim 1 including a media handling system configured to transport individual sheets of material relative to the ink dispenser.

20. (Original) The system of Claim 19, wherein the media handling system is configured to handle sheets of material having a minor dimension less than 9 inches.

21. (Previously Presented) The system of Claim 19, wherein the media handling system is configured to stack the individual printed upon sheets.

22. (Original) The system of Claim 1 including a heater configured to heat the deposited ink, whereby vapor is produced.

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Original) A printing system comprising:  
means for depositing ink upon a print medium;  
means for condensing vapor to form a condensate; and  
means for storing the condensate, wherein the means for storing includes an inlet and means for automatically occluding the inlet when disconnected from a remainder of the printing system.

28. (Original) The system of Claim 27 including means for storing includes means for evaporating a portion of the condensate while the condensate is being stored.

29. (Original) The system of Claim 27 including means for heating the deposited ink, whereby vapor is formed.

30. (Original) A method of printing ink upon a medium, the method comprising:

depositing ink upon the medium;  
heating the deposited ink to create a vapor;  
condensing the vapor into a condensate;  
collecting the condensate in a first receptacle; and  
absorbing at least a portion of the condensate into a first absorption member within the first receptacle.

31. (Original) The method of Claim 30 including circulating a fluid through a thermally conductive conduit having a condensing surface to cool the condensing surface to a temperature to condense the vapor.

32. (Original) The method of Claim 30 including powering a thermoelectric module having a cool portion and a hot portion, wherein the cool portion is thermally coupled to a condensing surface along which the vapor is condensed.

33. (Previously Presented) The method of Claim 30 including evaporating a portion of the condensate within the first receptacle.

34. (Original) The method of Claim 30 including replacing the first absorption member with a second absorption member.

35 (Original) The method of Claim 30 including replacing the first receptacle with a second receptacle when at least a portion of the first receptacle is filled with condensate.

36. (Original) The method of Claim 30 including sending the first receptacle at least partially filled with the condensate to a collection entity for recycling or disposal of the condensate.

37. (Original) The method of Claim 30 including sensing an amount of condensate within the first receptacle.



38. (Original) The method of Claim 30 including directing the vapor across a condensing surface and through a filter.

39. (Original) The method of Claim 30, wherein the step of depositing ink includes ejecting ink from an inkjet printhead upon the medium.

40. (Previously Presented) The system of claim 9, wherein the condenser includes a plurality of fins thermally coupled to the thermoelectric module.

41. (Previously Presented) The system of claim 40 wherein the plurality of fins converge from an inlet side proximate the ink dispenser and have a first dimension to an outlet side distant the ink dispenser and having a second smaller dimension.

42. (Previously Presented) The system of claim 1, wherein the condenser includes a plurality of fins converging from an inlet side proximate the ink dispenser and having a first dimension to an outlet side distant the ink dispenser and having a second smaller dimension.

43. (Previously Presented) The system of claim 1 further comprising one or more conduits configured to direct all of the condensate from the condenser to the receptacle.

**EVIDENCE APPENDIX**

There is no evidence previously submitted under 37 C.F.R. §§ 1.130, 1.131 or 1.132 or other evidence entered by the Examiner and relied upon by Appellant in this appeal. Accordingly, the requirements of 37 C.F.R. §§ 41.37(c)(1)(ix) are satisfied.

**RELATED PROCEEDINGS APPENDIX**

There are no decisions rendered by a Court of the Board in a proceeding identified in the Related Appeals and Interferences section. Accordingly, the requirements of 37 C.F.R. §§ 41.37(c)(1)(x) are satisfied.